

## PATENT COOPERATION TREATY

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P 02 080 WO		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/DK 02/00462	International filing date (day/month/year) 02.07.2002	Priority date (day/month/year) 02.07.2002	
International Patent Classification (IPC) or both national classification and IPC A23G3/30			
Applicant GUMLINK AS			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 10 sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>			
Date of submission of the demand  26.01.2004		Date of completion of this report  16.11.2004	
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Vernier, F  Telephone No. +49 89 2399-8646 	

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/DK 02/00462**

**1. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-36 as originally filed

**Claims, Numbers**

1-31 received on 01.10.2004 with letter of 29.09.2004

**Drawings, Sheets**

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
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International application No. **PCT/DK 02/00462**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-31
	No: Claims	
Inventive step (IS)	Yes: Claims	1-31
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-31
	No: Claims	

2. Citations and explanations

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/DK 02/00462

**Item V**

**1. The following documents are considered:**

- D1: EP-A-0 151 344 (WARNER LAMBERT CO)
- D2: US-A-5 017 385 (WIENECKE HORST P)
- D3: US-A-4 737 366 (GERGELY GERHARD ET AL)
- D4: DE 28 08 160 A (NORDSTROEM RABBE)
- D5: EP-A-0 221 850 (WARNER LAMBERT CO)
- D6: US-A-4 000 321 (MOCHIZUKI KEIZO ET AL)

**2. Article 33(2) PCT**

None of the cited documents discloses a chewing gum comprising a chewing gum centre made of gum base granules which comprise flavour or an active ingredient and conventional gum base granules, in addition to chewing gum additives such as sweeteners or flavours. Thus, the subject-matter of present claims 1-31 is novel.

**3. Article 33(3) PCT**

In view of the technical problem to be solved (to provide a flavoured chewing gum) and its unexpected solution (use of gum base granules which comprise flavour or an active ingredient and conventional gum base granules, in addition to chewing gum additives such as sweeteners or flavours), the subject-matter of claims 1-31 can be regarded as involving an inventive step over the closest prior art D1 (only one type of gum base granules).

**4. Article 33(4) PCT**

The subject-matter of present claims 1-31 meets the requirements of Article 33(4) PCT, since it is applicable in the food industry.

**5. Further comments**

- a. Article 6 PCT: the word "about" in present claims and in the description is unclear (Article 6 PCT and PCT Guidelines III-4.5).
- b. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the documents D1-D3 have not been identified in the description and the relevant background art disclosed therein has not been briefly discussed.

REPLACED BY  
ART 34 AMDT

Patent Claims

1. Compressed chewing gum tablet (37) comprising a chewing gum center (38),  
  
5 said gum center (38) comprising a compression of gum base granules (32) and chewing gum additives (33),  
  
said chewing gum additives comprising sweeteners and flavors,  
  
10 at least a first part of said gum base granules (32) comprising flavor or active ingredients incorporated gum base,  
  
at least a second part of said gum base granules (32) comprising granules of conventional gum base.  
  
15
2. Compressed chewing gum tablet according to claim 1, wherein  
said at least a first part of said gum base granules (32) comprising flavor resistant resin.
- 20 3. Compressed chewing gum tablet according to claim 1 or 2, wherein  
said at least a first part of said gum base granules (32) comprising synthetic resin.
4. Compressed chewing gum tablet according to any of claims 1 to 3, wherein  
said synthetic resin comprising polyvinyl acetate, vinyl acetate-vinyl laurate,  
25 copolymers and mixtures thereof.
5. Compressed chewing gum tablet according to any of claims 1 to 4, wherein  
said at least a first part of said gum base granules (32) being substantially wax-free.
- 30 6. Compressed chewing gum tablet according to any of claims 1 to 5, wherein  
said chewing gum tablet having a water content of less than 5% by weight,  
preferably of less than 3% by weight, even more preferably less than 1% by weight.

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ART 34 AMDT

7. Compressed chewing gum tablet according to any of claims 1 to 6, wherein said gum center (38) being substantially free of compression aid compounds.
- 5 8. Compressed chewing gum tablet according to any of claims 1 to 7, wherein said at least a second part of said gum base granules (32) being tackiness moderated.
9. Compressed chewing gum tablet according to any of claims 1 to 8, wherein said at least a second part of said gum base granules (32) comprising natural resins.
- 10 10. Compressed chewing gum tablet according to any of claims 1 to 9, wherein said at least a second part of said gum base granules (32) comprising wax.
11. Compressed chewing gum tablet according to any of claims 1 to 10, wherein
- 15 said moderated tackiness being obtained by means of at least one natural resin incorporated in at least a part of the gum base granules (32)
12. Compressed chewing gum tablet according to any of claims 1 to 11, wherein the compressed chewing gum tablet comprises about 3 % to 50 % by weight of
- 20 natural resins, preferably about 5% to 40% by weight.
13. Compressed chewing gum tablet according to any of claims 1 to 12, wherein the compressed chewing gum tablet comprises about 0.5% to 30% by weight of elastomers, preferably about 5% to 25% by weight.
- 25 14. Compressed chewing gum tablet according to any of claims 1 to 13, wherein the compressed chewing gum tablet comprises about 0.1 % to 15 % by weight of flavoring agents, preferably about 0.8 % to 5 % by weight.
- 30 15. Compressed chewing gum tablet according to any of claims 1 to 14, wherein the natural resins provides an improved and sticky texture of the tablet.

REPLACED BY  
ART 34 AMDT

16. Compressed chewing gum tablet according to any of claims 1 to 15, wherein said barrier layer comprises e.g. lubricants, anti-adherents and glidants.
17. Compressed chewing gum tablet according to any of claims 1 to 16, wherein  
5 the barrier layer comprises magnesium stearate.
18. Compressed chewing gum tablet according to any of claims 1 to 17, wherein said barrier layer comprises metallic stearates, hydrogenated vegetable oils, partially hydrogenated vegetable oils, polyethylene glycols, polyoxyethylene monostearates,  
10 animal fats, silicates, silicates dioxide, talc, magnesium stearates, calcium stearates, fumed silica, powdered hydrogenated cottonseed oils, hydrogenated vegetable oils, hydrogenated soya oil and mixtures thereof.
19. Compressed chewing gum tablet according to any of claims 1 to 18, wherein  
15 the gum center is substantially free of lubricants, anti-adherents and glidants.
20. Compressed chewing gum according to any of the claims 1 to 19, wherein said chewing gum additives comprises sweeteners in the amount of from about 5 to about 95% by weight of the chewing gum, more typically about 20 to about 80% by weight  
20 such as 30 to 60% by weight of the gum.
21. Chewing gum granulate,  
-at least a part of the chewing gum granulate particles being incorporated with flavor and/or active ingredients and comprising gum base made on the basis of synthetic  
25 resins and  
-at least a part of the chewing gum granulate particles comprising gum base made on the basis of natural resins.
22. Chewing gum granulate according to claim 21, wherein at least a part of the  
30 chewing gum granulate comprises bulk sweeteners, preferably sorbitol.
23. Method of providing a compressed chewing gum comprising the steps of

- mixing at least one elastomer and at least one plasticizer into a first homogenous gum base,
- incorporating an amount flavor into said first gum base, preferably by mechanically mixing,
- granulating said flavor incorporated gum base,
- mixing at least one elastomer and at least one plasticizer into a second homogenous gum base,
- granulating said second gum base,
- blending said first and said second gum base during addition of further chewing gum additives and
- compressing the mixture into a tablet.

24. Method according to claim 23, whereby the granulation is performed during addition of at least one bulk sweetener.

25. Chewing gum granulate wherein  
a first part of the chewing gum granulate comprising granules being incorporated with flavor and/or active ingredients

a second part of the chewing gum granulate comprising granules on conventional gum base.

26. Chewing gum granulate according to claim 25, wherein  
the first part of the chewing gum granulate comprises synthetic resins.

27. Chewing gum granulate according to claim 25 or 26, wherein  
the second part of the chewing gum granules comprises gum base made on the basis of natural resins.

28. Chewing gum granulate according to any of the claims 25 to 27, wherein  
the first part of the chewing gum granulate is substantially free of natural resins.



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ART 34 AMDT

29. Chewing gum granulate according to any of the claims 25 to 28, wherein the first part of the chewing gum granulate is substantially free of wax.
- 5 30. Chewing gum granulate according to any of the claims 25 to 29, wherein the chewing gum granulate comprises grinding aid, preferably bulk sweeteners.
31. Chewing gum granulate according to the claim 30, wherein said grinding aid comprises sorbitol.
- 10 32. Chewing gum granulate according to any of the claims 25 to 31, wherein said synthetic resin comprising polyvinyl acetate, vinyl acetate-vinyl laurate copolymers and mixtures thereof.
- 15 33. Chewing gum granulate according to any of the claims 25 to 32, wherein the granulate is substantially free of lubricants, anti-adherents and glidants.